



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

December 03, 2013

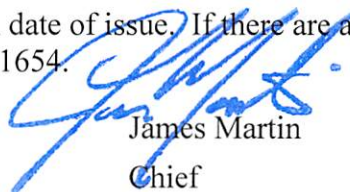
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4500929, issued to CHESAPEAKE APPALACHIA, L.L.C., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 809833

Farm Name: ADKINS, BENNY RAY

API Well Number: 47-4500929

Permit Type: Plugging

Date Issued: 12/03/2013

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
2. Well work activities shall not constitute a hazard to the safety of persons.

FORM WW-4 (B)
Observe
File Copy
(Rev. 2/01)

1) Date: 10/17/2013
2) Operator's Well No. 809833 P&A
3) API Well No. 47-045-00929

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil Gas X Liquid injection Waste disposal
(Is Gas, Production X or Underground storage) Deep Shallow X
- 5) Location: Elevation 1086' Watershed Guyandotte River
District Island Creek County Logan Quadrangle Logan, WV 7.5'
05 45 442
- 6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Eric B. Gillespie
Address P.O. Box 18496 Address P.O. Box 6070
Oklahoma City, OK 73154-0496 Charleston, WV 25362
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Ralph Triplett Name Chesapeake Appalachia, L.L.C.
Address 5539 McClellan Hwy Address P.O. Box 18496
Branchland, WV 25506 Oklahoma City, OK 73154-0496

10) Work Order: The work order for the manner of plugging this well is as follows:

See Attached Sheet

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work Order approved by Inspector Ralph D. Triplett Date October 25, 2013

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Environmental Protection

47-045-00929

809833 P&A Procedure

- 1) Prepare road and location, MIRU Service Rig
- 2) Either
 - A) Set CIBP at approximately 2500' and place 100' cement on top with dump bailer or work string
 - Or
 - B) Run W.S. to 2525', spot gel and spot 150' cement plug 2525'-2375', pull W.S.
- 3) Run tools to check top of plug. If top of plug is not at least 2425', then re-spot plug.
- 4) Run W.S. to 2225', spot gel
- 5) Spot 100' cement plug 2225'-2125', pull W.S.
- 6) Cut 4 1/2" at free-point (approximately 1750') and pull
- 7) Run W.S. to 4 1/2" casing cut (approximately 1750'), spot gel
- 8) Spot 150' cement plug approximately 1750'-1600'. NOTE: This plug could be set through 4 1/2" prior to pulling.
- 9) Run or pull W.S. to 1325', load hole with gel
- 10) Spot 125' cement plug 1325'-1200', pull W.S. to 670'
- 11) Spot 125' cement plug 670'-545', pull W.S. to 410'
- 12) Spot 100' cement plug 410'-310', pull W.S. to 175'
- 13) Spot 175' cement plug 175'-surface
- 14) Pull W.S., top off with cement
- 15) Erect monument and reclaim as prescribed by law

8a) SPOT 100' CEMENT PLUG ACROSS COAL
FROM 1600' - 1500'.

IF 1 1/4" IS NOT CEMENTED TO SURFACE, SOME
CAN BE CUT & PULLED. FREE POINT 1 1/4", CUT
AT FREE POINT, SET 100' CEMENT PLUG ACROSS
THE CASING CUT AND PULL 1 1/4" OUT OF HOLE.

ENTIRE WELLBORE MUST BE FILLED WITH GEL
(MINIMUM OF 6% BY WEIGHT) OR CLASS A CEMENT.

CEMENT PLUGS MUST BE A MINIMUM OF 100 FT.

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Document PROVIDED BY OOG

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Form OG-10

26-00
A-5 IV
(5)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 3

OIL & GAS DIVISION
DEPT. OF MINES

Rotor ☒
Spudder ☐
Cable Tools ☐
Storage ☐

Quadrangle **Logan**
Permit No. **106-929**

WELL RECORD

Oil or Gas Well **Gas** Q. NO. 1

Company **Columbia Gas Transmission Corporation**
Address **Charleston, West Virginia**
Farm **Monco, Inc.** Acres **1250.68**
Location (waters) **Guyandotte River**
Well No. **9833** Elev. **1095.36**
District **Island Creek** County **Logan**
The surface of tract is owned in fee by **Monco, Inc.**
Address **Logan, W. Va.**
Mineral rights are owned by **Monco, Inc.**
Address **Logan, W. Va.**
Drilling commenced **October 6, 1973**
Drilling completed **October 13, 1973**
Date Shot **Not Shot** From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume Cu. Ft.
Rock Pressure lbs. hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) **Not Acidized**
WELL FRACTURED (DETAILS) **Fractured squaw formation on 11-13-73 with 6,500# of 10/20 sand and 390 bbls. of fluid**
RESULT AFTER TREATMENT (Initial open flow or bbls.) **400 MCF**
ROCK PRESSURE AFTER TREATMENT **570#** HOURS **48**
Fresh Water **51'** Feet Salt Water **1551'** Feet
Producing Sand **Squaw** Depth **2609'**

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16"	37'	37'	Kind of Packer
13			
xx 11-3/4"	636'	636'	Size of
8 1/4			
6 3/4			Depth set
5 3/16			
4 1/2	2571'	2571'	
3			Perf. top 2523'
2			Perf. bottom 2537'
Liners Used			Perf. top
			Perf. bottom
Attach copy of cementing record.			
CASING CEMENTED 11-3/4" SIZE	37'	10-6-73	
Amount of cement used (bags)	266 bags	10-9-73	Date
Name of Service Co.	Dowell	10-14-73	
COAL WAS ENCOUNTERED AT	40 FEET	36 FEET	
130 FEET	60 INCHES	373 FEET	24 INCHES
595 FEET	72 INCHES	1551 FEET	24 INCHES
		1557 FEET	12 INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface Clay & Shale			0	20			
Sand			20	40			
Coal			40	43			
Sandy Shale			43	84			
Sand			84	130			
Coal & Slate			130	135			
Sand			135	373			
Coal			373	375			
Sand			375	457			
Shale			457	467			
Sand			467	547			
Shale			547	553			
Sand			553	595			
Coal			595	601			
Sand			601	620			
Shale			620	638			
Sand			638	672			
Sandy Shale			672	719			
Sand			719	758			
Sandy Shale			758	816			
Sand			816	875			
Sandy Shale			875	949			
Sand			949	1026			
Sandy Shale			1026	1053			
Sand			1053	1246			
Sand & Shale			1246	1318			
Salt Sand			1318	1551			
Coal			1551	1553			
Shale			1553	1557			

Water at 51'

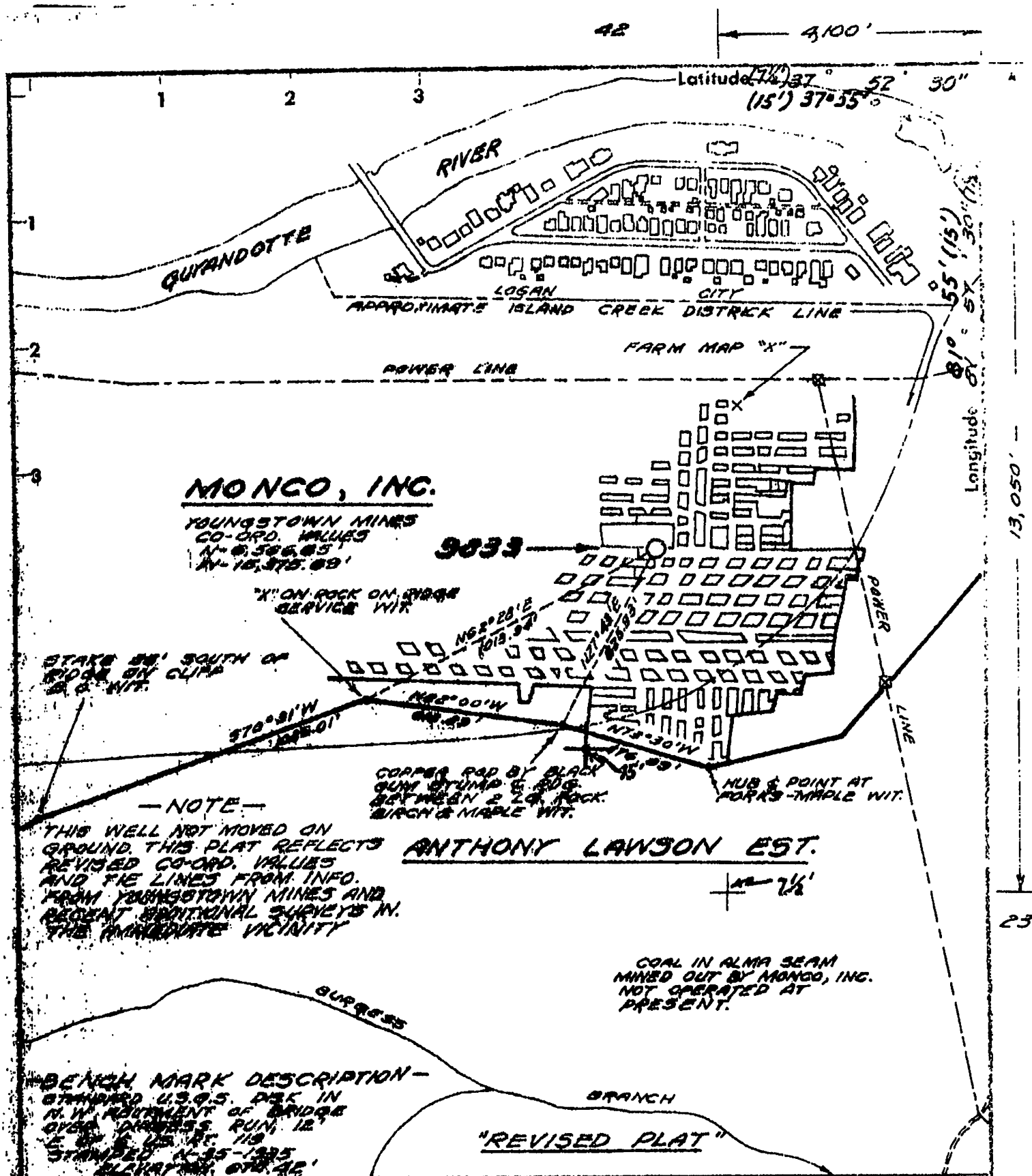
Hole damp at 1430'
Water at 1551'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Coal			1557	1558		LOGGED 10-14-73	
Sand & Shale			1558	1587		Formation Density	
Salt Sand			1587	1773		Gamma Ray	
Shale, Sand & Red Rock			1773	1878		Dual Induction	
Shale & Red Rock			1818	1884			
Sand			1884	1932			
Sand, Shale & Red Rock			1932	1941			
Sand, Maxon			1941	1971			
Shale			1971	1999			
Sand, Shale & Red Rock			1999	2116			
Little Lime			2116	2137			
Shale			2137	2193			
Big Lime			2193	2422			
Slate & Shale			2422	2522			
Squaw			2522	2534			
Slate & Shale			2534	2609			
TOTAL DEPTH			2609				

Date 1-14-74

APPROVED _____, Owner

By *E. J. [Signature]*
(Name)



Fracture
Before 6/3/29 ☐
New Location ☒
Drill Deeper ☐
Redrill ☐
Abandonment ☐

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by Paragraph 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.

The accuracy of this survey is within the limits and as prescribed in Paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.

Company COL. GAS TRANS. CO. INC.

Address CHARLESTON, W.VA.

Farm MONCO, INC.

Tract Acres 1250.00 Lease No. 00450

Well (Farm) No. 3 Serial No. 3033

Elevation (Spirit Level) 1095.30'

Quadrangle LOGAN, W.VA. - 15' & 7 1/2'

County LOGAN District ISLAND CREEK

Engineer Arthur E. Chapman

Engineer's Registration No. 2330

File No. 42-23 Drawing No.

Date 8-28-74 Scale 1" = 400'

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. Log-929-Rev.

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

WW4-A
Revised
2/01

10000
CK 5082820

45 009290

1) Date: 10/17/2013
2) Operator's Well No. 809833 P&A
3) API Well No. 47-045-00929

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:

(a) Name Benny Ray Adkins
Address 411 Circle Drive
Logan, WV 25601

(b) Name Ratz Resources, L.L.C.
Address 867 Ratz Lane
Logan, WV 25601

(c) Name _____
Address _____

6) Inspector Ralph Triplett
Address 5539 McClellan Hwy
Branchland, WV 25506

Telephone 304-389-0350

5) Coal Operator

(a) Name None
Address _____

Coal Owner(s) with Declaration

(b) Name Lynn Branch Coal Company, Inc.
Address One Alpha Place
P.O. Box 16429
Bristol, VA 24202

Name _____
Address _____

Coal Lessee with Declaration

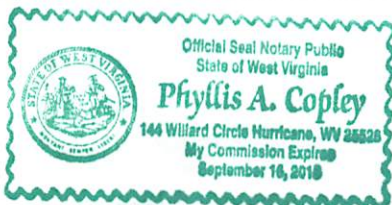
(c) Name Lynn Branch Coal Company, Inc.
Address One Alpha Place
P.O. Box 16429
Bristol, VA 24202

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed the Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of the Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator: Chesapeake Appalachia, L.L.C.
By: [Signature]
Its: Operations Manager - Devonian District
Address: P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone: 405-935-4073

Subscribed and sworn before me this 23rd day of October the year of 2013

My Commission Expires September 16, 2018

Notary Public

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OCT 25 2013

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Environmental Protection

4500929P

Form WW-9
Rev. 02/01Page _____ of _____
API Number 47-045-00929
Operator's Well No. 809833 P&A

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Chesapeake Appalachia, L.L.C. OP Code 494477557
 Watershed Guyandotte River Quadrangle Logan, WV 7.5
 Elevation 1086' County Logan District Island Creek

Description of anticipated Pit Waste: Plugging Returns/CementWill a synthetic liner be used in the pit? Yes 20 MIL.

Proposed Disposal Method For Treated Pit Wastes:

- ☒ Land Application
☐ Underground Injection (UIC Permit Number _____)
☐ Reuse (at API Number _____)
☐ Off Site Disposal (Supply form WW-9 for disposal location)
☐ Other (Explain _____)

Proposed Work For Which Pit Will Be Used:

- ☐ Drilling
☐ Workover
☐ Swabbing
☒ Plugging
☐ Other (Explain _____)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on December 31, 1999, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Company Official (Typed Name) David GockeCompany Official Title Operations Manager - Devonian DistrictSubscribed and sworn before me this 23rd day of October, 2013.Phyllis A. Copley

Notary Public

My Commission Expires September 16, 2018

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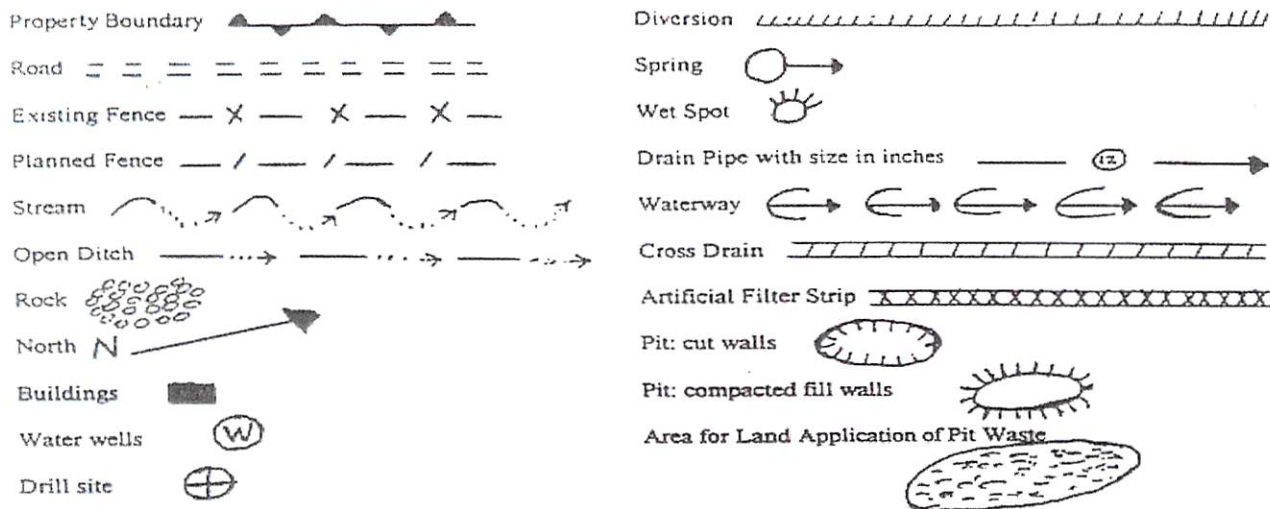
Department of
 Environmental Protection

Attachment #1

API #: 47-045-00929

Operator's Well No. 809833 P&A

LEGEND

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.1Lime 3 Tons/acre or to correct to pH 6.5Fertilizer (10-20-20 or equivalent) 1/3 TON lbs/acre (500 lbs minimum)Mulch Hay 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	ORCHARD GRASS	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		

Attach:

Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Rogel D. TripodiTitle: District InspectorDate: October 25, 2013Field Reviewed? (☒) Yes (☐) No

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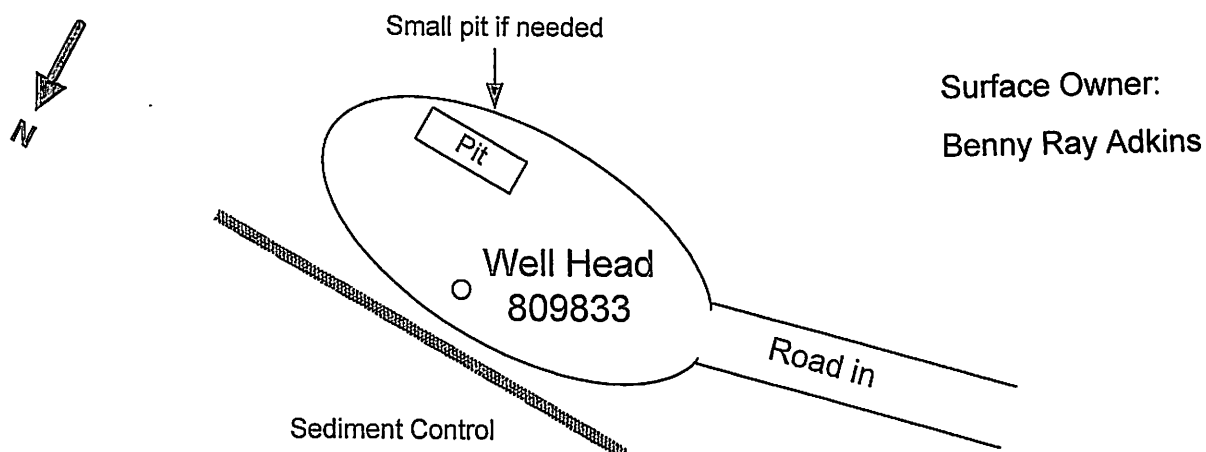
CHESAPEAKE APPALACHIA, L.L.C.

Diagram of Well 809833 for P&A

API 47-045-00929

Field Office - Branchland

County -Logan

**GENERAL NOTES**

This drawing is a schematic representation of the well site and access road. Proposed structures such as well site, drilling pit, roadways, culverts sediment barriers etc. are shown in approximate pre-planning configurations.

All culvert pipes will be a minimum of 15 inches in diameter. All culvert pipes installed will be accompanied by an entrance sump with dimensions no less than 3 feet (width) x 3 feet (length) x 4 feet (deep). Culverts will be installed at an angle to ensure proper flow. The out fall of culverts will be protected from erosion and sedimentation using large rocks or other sediment controls deemed necessary in the prevention of erosion and sedimentation. Storm water from the ditches to the culverts will be directed to stable natural vegetative areas. Where culverts are not practical, operator will have other sediment control in place to minimize erosion and sedimentation.

Cross drains, broad based dips, water bars, and diversion ditches will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the construction phase, where applicable and areas that will allow. These structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1

Site Plan

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Office of Oil and Gas

OCT 25 2013

Prepared by: Kris Aldridge
Date: 10/10/2013

WV Department of
Environmental Protection

No Scale

CHESAPEAKE APPALACHIA, L.L.C.

Topographical Map of Access and

Location 809833 for P&A

API 47-045-00929

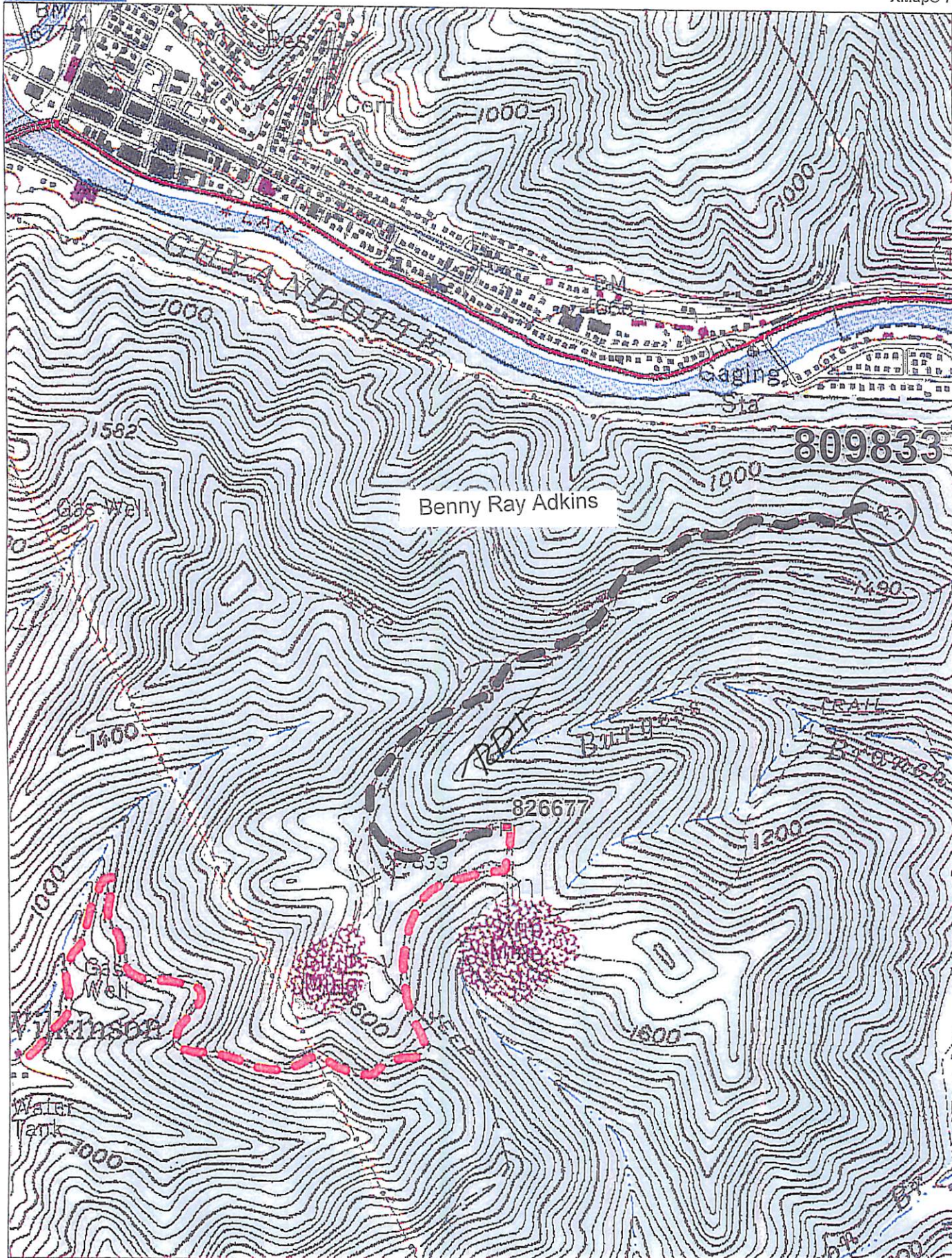
Field Office - Branchland

County - Logan

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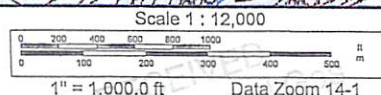
XMap® 7



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www.delorme.com



Chesapeake Energy Corporation - Eastern Division
P.O. Box 579 • 8165 Court Avenue • Hamlin, WV 25523
304.824.5141 • fax 304.824.2247

Office of Oil and Gas
NOV 05 2013
WV Department of
Environmental Protection

NOTE: ALL WELLS IDENTIFIED
WITHIN 2400' ARE SHOWN

LATITUDE 37° 52' 30"

4,193"

809833

BENNY RAY ADKINS
TM 156, PAR 09
WB 43/180
1,085 AC.

DISTRICT
DISTRICT

LONGITUDE 81° 57' 30"

12,932'

BURGESS

826877
P-2037

S 47° 14' W - 5.109'

S 34° 58' W - 5.348'

6" ASH MKD
CENTER OF RIDGE

SHARON ARMSTRONG DICKENSON ADKINS &
BENNY RAY ADKINS
TM 158, PAR 09
477/305
1,219 AC.

6" POP. MKD
CENTER OF GAP

ISLAND CREEK
LOGAN

THOMPSON

BRANCH

NOTE: NO BUILDING STRUCTURES
IDENTIFIED WITHIN 200'

WELL SITE

STATE PLANE WV
SOUTH ZONE NAD 1927
N - 307,160.78 : E - 1,719,061.13

LATITUDE: (N) 37.8395089
LONGITUDE: (W) 81.9728603

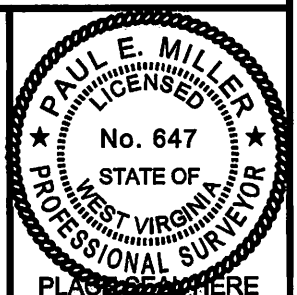
UTM, NAD83
17 - 84W TO 78W, METERS
N - 4,188,465.696 : E - 414,412.283

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 809833 P&A.DGN
DRAWING NO. 809833 P&A
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY 1 : 200
PROVEN SOURCE OF
ELEVATION MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF ENVIRONMENTAL PROTECTION
(SIGNED) *Paul E. Miller*

R.P.E. L.L.S. 647



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION



DATE NOVEMBER 06 REV. , 20 13
OPERATOR'S WELL NO. 809833
API WELL NO.

47 045 00929 P
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,086' WATER SHED GUYANDOTTE RIVER
DISTRICT ISLAND CREEK COUNTY LOGAN
QUADRANGLE LOGAN. WV 7.5'

SURFACE OWNER BENNY RAY ADKINS ACREAGE 1.085
OIL & GAS ROYALTY OWNER BENNY RAY ADKINS LEASE ACREAGE 1.085

LEASE NO.

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON X CLEAN OUT AND REPLUG

TARGET FORMATION ESTIMATED DEPTH

WELL OPERATOR CHESAPEAKE APPALACHIA, L.L.C. DESIGNATED AGENT ERIC GILLISPIE

ADDRESS P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496 ADDRESS PO BOX 6070, CHARLESSTON, WV 25362

FORM WW-6

COUNTY NAME

PERMIT